

CLAIMS

1. An engine control system for a construction machine comprising an engine (10), at least one variable displacement hydraulic pump (1, 2) driven by said engine, a plurality of hydraulic actuators (50-56) driven by a hydraulic fluid delivered from said hydraulic pump, a plurality of flow control valves (5a-5i) for controlling respective flow rates of the hydraulic fluid supplied from said hydraulic pump to said plurality of hydraulic actuators, operating means (38-44) for operating said plurality of flow control valves, a fuel injector (14) for controlling a revolution speed of said engine, input means (71) for commanding a target revolution speed (NR1) of said engine, and fuel injection amount control means (80) for computing a target fuel injection amount (FN1) based on the target revolution speed and controlling said fuel injector,

wherein said engine control system comprises status variable detecting means (73-78) for detecting a status variable related to a load of said hydraulic pump (1, 2), and

target revolution speed modifying means (70f-70r) for computing a target revolution speed (NR2) for use in control based on a change of the status variable such that the target revolution speed for use in control increases from the target revolution speed (NR1) set in accordance with a command from said input unit (71), and then moderately returns to the target revolution speed set in accordance

with the command from said input unit, said fuel injection amount control means (80) computing the target fuel injection amount (FN1) based on the target revolution speed for use in control.

2. An engine control system for a construction machine according to Claim 1, wherein said target revolution speed modifying means (70f-70r; 70i, 70j, 70k) maintains the increased engine revolution speed (NR2) for a certain time after the change of the status variable has ceased.

3. An engine control system for a construction machine according to Claim 1, wherein said target revolution speed modifying means (70f-70r; 70g, 70h) computes an increase amount of the target revolution speed (NR2) as a variable value depending on the target revolution speed (NR1) set in accordance with the command from said input unit (71).

4. An engine control system for a construction machine according to Claim 1, wherein said target revolution speed modifying means (70f-70r) includes means (70f-70q) for computing, based on the change of the status variable, an engine revolution speed modification value ($\Delta T3$) which increases from 0 by a predetermined amount and then moderately returns to 0, and means (70r) for adding the engine revolution speed modification value to the target revolution speed (NR1) set in accordance with the command from said input unit (71).

5. An engine control system for a construction machine according to Claim 1, wherein said status variable detecting means (73-78) detects, as the status variable related to the load of said hydraulic pump (1, 2), at least one of operation signals from said operating means (38-44), a delivery capacity of said hydraulic pump, and a delivery pressure of said hydraulic pump.